In planning long flights an accurate forecast is needed. On January 2 the plane left Charleston, S. C., for Rockaway Beach, N. Y., a distance of a little over 600 miles. At first it was doubtful if the trip could be made in a single hop, for an active LOW was just passing into the North Atlantic and northwest winds existed from the Great Lakes to the Atlantic coast, with west winds following. After a careful study of the map, Commander Read was told that although northwest winds would exist at Charleston on the morning of the 2d, the *NC-4* would run out of them into fairly strong westerly winds by the time Hatteras was reached and would continue in them the rest of the journey. Under these conditions Rockaway Beach could be reached by evening. The trip was thus planned and the above conditions found. Charleston was left at 7:50 a. m. and Rockaway reached at 5:36 p. m., or 9 hours 46 minutes later. (This was about 25 minutes longer than the time it took the *NC-4* to fly from Ponta Delgada, Azores, to Lisbon, Portugal.) Because of the strength of the wind the average height of the plane during this flight was about 60 feet. From the start to the finish the air was extremely rough, so rough in fact that all members of the crew agreed that it was the worst air they had ever experienced. Following this flight a discussion arose concerning "head winds" and suggested to me the following remarks about the effects of cross winds upon the flight of the plane. A wind 90° to the line of flight, such as a west wind when the plane is flying to a point directly north of it, becomes more and more a head wind as it increases in velocity. It seems as if this should be perfectly evident since the plane must head into the wind, to a certain extent, to overcome the drift, yet it has been noticed that sometimes even those who have had considerable experience in aircraft forget this fact and will maintain that such a wind neither aids nor retards the plane.

NOTES, ABSTRACTS, AND REVIEWS.

NUMBER AND NATIONALITIES OF VESSELS MAKING WEATHER REPORTS TO THE UNITED STATES WEATHER BUREAU.

The following table gives the number of vessels of different nationalities on the Weather Bureau list, October 7, 1920, and the increase or decrease in number and percentage since October 8, 1919.

The decrease noticed in a few cases is due to the fact that the list was gone over thoroughly a short time ago and a number of vessels were taken off that did not appear in Lloyds Register or the Maritime Register, and were evidently out of commission. On the present list there are quite a few vessels that have not been heard from in the last two or three years; they are still in active service, however, and efforts are being made through the different marine centers to persuade their masters to resume the work. These efforts are meeting with considerable success, as shown by the number of old observers who are again sending in reports after a protracted period of inactivity.

Nationality of vessel.	Number on Oct. 7, 1920.	Increase or decrease since Oct. 8, 1919.	Percentage of increase or decrease.
United States Government	109	.....	.....
United States Shipping Board	405	.....	.....
All other American	478	.....	.....
Total American	992	404	68
British	536	10	2
Dutch	152	25	20
Japanese	131	[1] 2	[1] 2
French	73	10	16
Italian	73	18	33
Norwegian	42	2	5
Danish	38	[1] 5	[1] 12
Spanish	36	11	44
Belgian	31	12	63
Swedish	15	4	36
Russian and Finnish	6	[1] 2	[1] 25
Honduran	4	0	0
Chilian	3	2	200
Argentinian	2	1	100
Brazilian	2	0	0
Chinese	2	[1] 2	[1] 50
Interallied	2	1	100
Portuguese	2	0	0
Cuban	1	1	.....
German	1	1	.....
Greek	1	1	.....
Icelandic	[2] 1	1	.....
Mexican	1	1	.....
Peruvian	1	1	.....
Total	2,148	495	30

[1] Decrease. [2] Formerly under Danish flag.

—*F. A. Young.*

DISTRIBUTION OF WEATHER FORECASTS, WARNINGS AND INFORMATION BY RADIO.

In a recent circular (Oct. 26, 1920), the Forecast Division of the Weather Bureau has announced an enlarged plan for the dissemination of weather information, weather forecasts, warnings, and advices to shipping, which has been in actual operation for a number of years, by the office of communications of the Navy Department.

Following is a list of the distributing stations, with their present wave lengths and time of sending:

Station.	Wave length.	Sending time (75th meridian time).
Arlington, Va.	2,500 meters	Shortly after 10 p. m.
Key West, Fla.	1,500 meters	Shortly after 10 p. m.
Point Isabel, Tex.	2,350 meters	Midnight.
Great Lakes, Ill.	1,500 meters	Shortly after 10 p. m. (Apr. 15–Dec. 20).
San Juan, P. R.	600 meters, damped, followed by 5,250 meters con. wave.	9 p. m. (June to Nov., inclusive).

Each station sends out approximately the same character of bulletins, which are based upon the regular 8 p. m., 75th meridian time, Weather Bureau observation, but vary slightly to conform to the needs of the different sections to be informed. The bulletins are in two parts, the first consisting of the actual weather conditions at certain stations and being in code. The second part is in plain language and is a forecast giving the wind and weather conditions, and whatever information deemed necessary as to storm centers, storm and hurricane warnings.

EXAMPLE OF BULLETIN.

(First part:) USWB J 01662, S 00663, FP 98821, ML 95427, T 95846, NY 93258, DB 92888, LB 95612, CH 94216, AV 98282, C 96682, B 00661, etc.

(Second part:) Winds off Atlantic coast north of Sandy Hook will be shifting gales with rain. Sandy Hook to Hatteras, northwest gales with rains followed by clearing weather. Hatteras to Florida Straits, strong northwest winds; fair weather. Storm of marked intensity central off New Jersey coast moving northeastward. Storm warnings displayed Hatteras to Eastport.

Translation of a small portion of the first part is as follows: United States Weather Bureau, St. Johns, barometer 30.16, wind direction, SW., wind force 2 (Beaufort